

# PATENT COOPERATION TREATY

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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Rec'd PTO 14 JUN 2005

To:  
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**PCT**  
**10/538984**  
WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference <b>2003B133</b>		Date of Mailing (day/month/year) <b>14 OCT 2004</b>
International application No. <b>PCT/US03/40903</b>		REPLY DUE within 2 months/days from the above date of mailing
International filing date (day/month/year) <b>19 December 2003 (19.12.2003)</b>	Priority date (day/month/year) <b>20 December 2002 (20.12.2002)</b>	
International Patent Classification (IPC) or both national classification and IPC <b>IPC(7): C08F 4/12, 4/44, 4/64 and US Cl.: 526/90, 91, 144, 157, 158, 169, 206, 237</b>		
Applicant <b>EXXONMOBIL CHEMICAL PATENTS INC.</b>		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20 April 2005 (20.04.2005).

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Roberto Rábago <i>[Signature]</i> Telephone No. (571) 272-1700
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Form PCT/IPEA/408 (cover sheet)(July 1998)

ACKNOWLEDGED PATENT LEGAL ASSISTANT GROUP G. M. CARROLL	
OCT 18 2004	
<input checked="" type="checkbox"/> FYI <input type="checkbox"/> Reminder <input type="checkbox"/> File	EMCLT BAYTOWN

OCT 18 2004
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**I. Basis of the opinion****1. With regard to the elements of the international application:\***☒ the international application as originally filed☒ the description:pages 1-96, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.☒ the claims:pages 97-113, as originally filedpages NONE, as amended (together with any statement) under Article 19pages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.☒ the drawings:pages 1-3, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.☐ the sequence listing part of the description:pages NONE, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.**4. ☐ The amendments have resulted in the cancellation of:**☐ the description, pages NONE☐ the claims, Nos. NONE☐ the drawings, sheets/fig NONE**5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\*. Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. STATEMENT**

Novelty (N)	Claims <u>23-26,29-33,35,43-47,53</u>	YES
	Claims <u>1-22,27,28,34,36-42,48-52,54-69</u>	NO
Inventive Step (IS)	Claims <u>23-26,29-33,35,43-47,53</u>	YES
	Claims <u>1-22,27,28,34,36-42,48-52,54-69</u>	NO
Industrial Applicability (IA)	Claims <u>1-69</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-22,27,28,34,36-42,48-52 and 54-69 lack novelty under PCT Article 33(2) as being anticipated by US 5,728,783 (D1). The reference discloses polymerization comprising a primary transition metal catalyst in combination with a Lewis acid cocatalyst (see col. 4-8, Example). The reference furthermore recommends hydrofluorocarbon solvent as a polymerization medium (col. 5, line 14). Although the reference does not mention specific hydrofluorocarbon solvents, those of ordinary skill in the art are fully aware of at least the simplest HFC solvents available. Accordingly, the broad scope of these claims is not novel over the teachings of D1.

Claims 23-26,29-33,35,43-47 and 53 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the features of these dependent claims, particularly regarding initiators, the presence of water, and diluent mass uptake

Claims 1-69 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

WRITTEN OPINION

International application No.  
PCT/11863/40903

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.